2010 Progress Report on:

STATE OF MAINE COMPREHENSIVE ENERGY ACTION PLAN 2008-2009

The following plan outlines the necessary action steps the State of Maine should consider implementing in order to achieve energy independence over the next 50 years. The Maine Comprehensive Energy Action Plan (Plan) consists of six main components:

1) Strengthening Energy Efficiency, Conservation and Weatherization;
2) Fostering Renewable Energy;
3) Improving Transportation and Fuel Efficiencies;
4) Upgrading Electricity and Natural Gas Services and Transmission Infrastructure;
5) State of Maine Leading by Example; and
6) Energy Emergency Preparedness and Response

The goal of the Plan is to chart a clear pathway to guide the State of Maine into a sustainable, reliable, secure, affordable, and environmentally responsible energy future. The OEIS is charged with the responsibility to develop the Plan, coordinate its implementation and revise it every two years.

I. STRENGTHENING ENERGY EFFICIENCY, CONSERVATION AND WEATHERIZATION

Goal:
Achieve all cost-effective energy efficiency in the State of Maine.

Objective:
Combine the energy efficiency programs of Efficiency Maine, the natural gas utilities, the RGGI and the Energy and Carbon Savings Trust (E&CST) into a single, "energy efficiency entity".

Implementation:

- ✓ Work with public and private stakeholders to create the best governance and organizational structures for the State's energy efficiency entity.
- ✓ Include a fuel-neutral efficiency program for all sectors of the economy that leverages existing and future public and private funding.

✓Continue to leverage the RGGI E&CST proceeds to fund fuel neutral efficiency measures. (15% of total RGGI Trust funds available for fossil fuel efficiency.)

✓Use a "one-stop shopping", fuel-neutral approach to designing the energy efficiency entity in order to administer all energy efficiency programs in the state of Maine based on the principles of:

1. Being consumer oriented such that the process for participation and program design are targeted to serve multiple needs of the Maine energy consumer;

2. Maximizing the effectiveness of programs by building up and centralizing expertise, addressing conflicts of interest, mitigating the influence of politics, promoting flexible, nimble program management, and providing a champion of funding cost-effective energy efficiency;

3. Maximizing the efficiency with which programs are planned, designed, overseen, and delivered; and

4. Providing sufficient checks and balances to ensure that there is accountability for meeting principles 1-3 and so that EE programs in Maine are sustainable for the long term.

In 2009 the Efficiency Maine Trust (EMT) was established through LD 1485 An Act Regarding Maine's Energy Future based on the above principles. The newly established EMT Board took over operations and funding from Efficiency Maine and the Energy & Carbon Savings Trust on July 1, 2010. EMT is successfully administering all-fuels efficiency and renewable energy programs, including to large industrial customers using RGGI auction proceeds and American Recovery and Reinvestment Act (ARRA) funds.

Goal:

Aggressively provide opportunities for State government, local governments, Maine families, businesses, and industry to invest in energy efficiency, conservation and weatherization through Federal and state programs, grants, loans and other public and private funding mechanisms.

Objective:

Continue to identify and document existing energy efficiency programs and funding by maintaining a master database of state, federal and private sector grants, loans and other funding mechanisms.

Implementation:

- Research all state, federal and private funding programs for energy projects.
- Create database/spreadsheet defining funding by category, type and funds available.
- Research all tax incentives available from the State and Federal government.
- Create database/spreadsheet defining energy tax incentives and rebates by category, at both the State and Federal levels and make available on state agency websites for use by the public.
- Explore the possibilities for a major bond initiative or other funding mechanism to fund the energy efficiency entity and expand programs.
- Investigate different options to secure energy efficiency funding.

Status: In-progress.

OEIS has received funds from the Efficiency Maine Trust through the ARRA for a "Grants Connector" project to compile and disseminate information on all available energy funding opportunities. OEIS has contracted with Coastal Enterprise Inc., to help facilitate funding packages for energy efficiency and renewable energy commercial and industrial projects. A database of funding opportunities, including their guidelines and applicable deadlines, is continuously being updated.

OEIS is also investigating the creation of a Maine Energy Independence Fund to be funded partly through private investment for large-scale commercial and industrial efficiency and renewable projects.

Goal:
Support and implement energy audits for businesses and state facilities.

Objective:

In conjunction with the State's energy efficiency entity, create a "Smart Energy" energy audit model for Maine businesses not covered by existing programs.

Implementation:

- Research available public and private funding sources for energy projects or audits.
- Apply for and obtain Federal "Save Energy NOW Program" (NOW) funding for business conservation/efficiency project
- Review DOE's NOW program and create streamlined template for businesses.
- Create "project criteria" logic diagram for each component of fast-track NOW plan.
- Create a "go-no-go" template for energy project evaluations.
- Integrate any overlaps with Efficiency Maine and other state programs/models.

- Select ten Maine businesses to audit or use as beta sites for fast-track NOW audits.
- Create public / private partners for implementing projects that are a "go".

Goal:

Develop an interdisciplinary "Energy SMART Team" to assist large industries and manufacturers in addressing their critical energy needs.

Objective:

In conjunction with the State's energy efficiency entity, create an Energy SMART Team for Maine businesses to address critical energy needs.

Implementation:

- Create a standardized template/program for a SMART Energy Audit for businesses.
- Create a handbook for SMART Energy Audit that can be used by any resource.
- Select one Maine business as a trial for the SMART Energy Audit program.
- Review process and results of findings and modify program as applicable.
- Automate model as much as possible.

Status: In-progress.

OEIS is undertaking as part of the "Grants Connector" project and is working with its private sector partners to identify suitable projects, including those with increased energy efficiency or enhanced conservation of energy for electric, heating and cooling systems; and increased energy efficiency, enhanced conservation and weatherization in building or facility envelope, appliances, lighting, industrial equipment, systems and other components.

Objective:

In conjunction with the State's energy efficiency entity create a web-based application that businesses can use for self-auditing.

Implementation:

- Take the final program and automate it for web-based application.
- Integrate into OEIS web-site for utilization by Maine businesses.
- Create tracking tool to identify businesses using the on-line resource.

Goal:

Work with State Government to adopt an overall energy reduction goal at State facilities.

Objective:

Work with State agencies to identify potential energy efficiency opportunities at State facilities.

Implementation:

- ✓ Quantify energy usage, costs and annual savings at all State facilities, universities and schools and report back to the Legislature annually.
  - ❍ Develop an energy reduction plan and implement it to decrease overall energy usage at State facilities.
- ✓ Work with State Government to adopt wholesale power purchasing.
  - ❍ Work with the State energy efficiency entity to create outreach materials for all school districts building new or upgrading facilities.
  - ❍ Continue to work with the University of Maine and Maine Community College to decrease energy usage.

Status: On-going.

An overall state facilities goal has not been established. LD 1485, An Act Regarding Maine's Energy Future created the state Task Force to Advance Energy Efficiency, Conservation and Independence at State Facilities and a final report was completed in January, 2010. The Task Force's consensus was not to establish a quantitative energy savings goal.

The Bureau of General Services (BGS) has set a goal of reducing its use of #2 heating fuel by 5% by 2013 compared with 2008.

BGS has developed a database of energy usage for fuel oil, electricity, natural gas, propane and wood for state facilities. It is now possible to track energy usage and identify savings through large purchase contracts over standard rates.

Goal:

Continue to promote increased efficiency standards for all new construction.

Objective:

Support the Department of Public Safety and other relevant state agencies in the implementation of the newly enacted state wide energy and building codes.

Implementation:

- ✓ Work with and provide information to the Technical Building Codes and Standards Board in their effort to develop rules to resolve the conflicts between the Maine Uniform Building and Energy Code and the Fire and Life Safety Codes (Public Law 699, 2008.)

- ❍ Continue to evaluate and upgrade building codes and standards periodically to keep up with new technology and more efficient building techniques.

Status: On-going.

A Technical Building Codes and Standards Board located within the Department of Public Safety was established to adopt, amend, and maintain the Maine Uniform Building and Energy Code (MUBEC). The MUBEC took effect June 1, 2010 and enforcement in municipalities with more than 2,000 residents and an existing building code went info effect on December 1, 2010. For municipalities without an existing building code enforcement will begin on July 1, 2012.

Goal:
Increase the number and availability of energy efficient heating systems and appliances in the State of Maine.

Objective:
Encourage increased efficiency standards for heating systems and appliances.

Implementation:

- ✓ Require all state agencies to purchase "Energy Star" appliances and equipment and include in state procurement specifications.
- ❍ Adopt through state rulemaking enhanced appliance standards for appliances and heating systems currently not covered by Federal standards.

Status: On-going

State Property Management and Leased Space divisions have implemented policies requiring "Energy Star" appliances and equipment when they are replaced or installed. State Property Management is working towards making all of their buildings "Energy Star" rated.

Efficiency Maine Trust began offering an appliance rebate program in October, 2009 funded by the ARRA. This program is in place for two years.

Efficiency Maine Trust also began offering incentives for residential replacement heating equipment in May, 2010 funded by the ARRA. Incentives are available until program funding is depleted.

Goal:
Target weatherizing 100% of all Maine residences and 50% of all Maine businesses in the next twenty years.

Objective:

Promote winterization and weatherization programs through the State's energy efficiency entity for Mainers of all incomes and housing types to weatherize homes and businesses in order to reduce fuel use and reduce heating costs.

Implementation:

✓ Continue the purchase and distribution of "winterization kits" by State government and non-profit organizations for use by low income households.

✓ Work with the Community Action Agencies, volunteers and Maine Cooperative Extension to identify people in need and use existing networks for distribution of kits.

- In conjunction with the State's energy efficiency entity, weatherize 100% of the 476,729 Maine singe family residences over the next twenty years by making bonding, system benefit charge funding, grants and loans available to all income groups for energy audits and weatherization upgrades.
- In conjunction with the State's energy efficiency entity, weatherize 100% of the 50,000 Maine multi-family residences over the next twenty years by making bonding, system benefit charge funding, and grants and loans available to owners and tenants of multi-family units.
- In conjunction with the State's energy efficiency entity, weatherize 50% of businesses and industrial facilities in Maine over the next twenty years by making bonding, system benefit charge funding, and grants and loans available to business and industrial facility owners.

Status: In-progress.

Winterization kits were not distributed for the winter of 2010 as there was no funding available.

As a result of LD 1485, An Act Regarding Maine's Energy Future, the above weatherization goals are now in Maine statute. Residential weatherization efforts are underway through the newly created Home Energy Savings Program (HESP) administered by Efficiency Maine and funded for two years through the ARRA. To date, 1,699 homes have been weatherized under HESP and 2,846 low-income homes have been weatherized from Federal Weatherization Assistance Program (WAP) funds through the Maine Housing Authority in the last year.

OEIS worked with public/private partners (including legislators, banks, credit unions, energy efficiency advocates and municipalities) to enact L.D. 171 7 the Property Assessed Clean Energy (PACE). The PACE program authorizes municipalities and the Efficiency Maine Trust to provide low-interest loans to residential and business property owners to pay for cost-effective energy efficiency and clean energy improvements like insulation, air sealing, heating system upgrades, renewable energy

system installations and other projects. The Efficiency Maine Trust is launching the program in early 2011.

Objective:

Expand reach of the State's Home Energy Loan Program (HELP).

Implementation:

- Identify and eliminate barriers to expanding the HELP program.
- Quantify the need for energy upgrades.
- Explore increasing the funding for HELP to meet the identified need through general fund bond issues or other funding mechanisms.
- Continue to streamline application process.
- Create a program where home improvement contractors can be pre-approved to market the loans at the point of the transaction.

Status: Discontinued.

The HELP program was discontinued by Maine State Housing Authority (MSHA) in response to the establishment of the Home Energy Savings Program (HESP) administered by the Efficiency Maine Trust.

Objective:

Continue and expand the State's "Clean Tune and Evaluate Program" (CTE) in order to repair the oldest and most inefficient furnaces in low income homes.

Implementation:

- ✓ Continue to make referrals of eligible low-income households to participating fuel dealers to receive service.
- ✓ Continue to expand the pool of participating fuel dealers through additional outreach.

Status: The CTE program was discontinued in the 2010/11 winter season due to lack of funds.

In 2009, 907 homes received heating system improvements from the CTE program. In 2010, 1,209 low-income homes received heating system improvements through the Central Heating Improvement Program (CHIP) funded by LIHEAP that reduces fuel consumption by 15%-20%. Other CHIP services include repairs, replacement of oil tanks, and chimney work.

Goal:

Continue to promote and enhance training opportunities for certified energy auditors and weatherization technicians.

Objective:

Continue to increase the number of training courses for certified energy auditors.

Implementation:

- Determine need for additional energy auditors.
- Expand existing State-run energy auditor training programs.
- Combine existing State-run energy auditor training programs.
- Continue to work with the state's energy efficiency entity, Maine's Community College system, the Maine Homebuilders and Remodelers Association and private businesses to increase the number of energy audit training courses.

Status: On-going.

Nine organizations currently offer BPI residential energy efficiency training including energy auditor and weatherization certifications with courses offered in the classroom, in the field and on-line. See http://www.efficiencymaine.com/at-home/hesp_program/become_an_energy_advisor for a listing.

Objective:

Increase training for energy efficiency and weatherization service technicians.

Implementation:

✓ Determine need for additional energy efficiency and weatherization service technicians for residential, business and industrial sectors.

✓ Continue to conduct outreach to existing contractors to encourage them to undertake energy efficiency and weatherization work.

✓ Work with the MSHA, the MPUC, Efficiency Maine, Maine's Community College system, the Maine Homebuilders and Remodelers Association, and private businesses to increase the number of weatherization technician training courses.

- Investigate incentives for contractors to take energy education and curriculum training to switch to energy efficiency and weatherization work.

Status: On-going.

Nine organizations currently offer BPI residential energy efficiency training including energy auditor and weatherization certifications with courses offered in the classroom, in the field and on-line. See http://www.efficiencymaine.com/at-home/hesp_program/become_an_energy_advisor for a listing.

Goal: Reduce peak-load energy consumption in all sectors.

Objective:

Develop a plan to increase energy efficiency, conservation and to reduce peak-load energy consumption in existing and new state government buildings. (Resolve 183, 2008.)

Implementation:

- ✓ Work with BGS and other state agencies to issue a Request for Proposal (RFP) to procure a third-party energy response company to manage the state's demand response capabilities.
- ✓ Work with BGS and other state agencies to issue an RFP to procure a third-party energy response company to purchase wholesale power for State of Maine facilities.
- ✓ Submit a report by December 1, 2009 to the Utilities and Energy Committee that includes findings and recommendations and a plan for purchasing wholesale power and reducing peak consumption in state government buildings, together with any necessary implementing legislation. (Resolve 183, 2008.)
- ❍ Encourage the wide-spread use of demand response in government and the private sector through third party managers to decrease energy use and increase revenue streams.
- ❍ Expand participation from all sectors in regional demand response programs.
- ❍ Include "demand reduction induced price effect" when calculating energy efficiency program cost-effectiveness and the effects on overall pricing.

Status: On-going.

BGS has retained a private company, EnerNoc, to reduce peak-load energy consumption though a demand response program. Currently, 2,531kWkW (all available facilities) of state capacity have been enrolled.

BGS had a contract in place to assist the state in procuring wholesale power for state facilities, but the contract lapsed and these functions are now being performed in-house.

Reporting on the above implementation measures is included in the final report of the Task Force to Advance Energy Efficiency, Conservation and Independence at State Facilities presented to the Joint Standing Committee on Utilities and Energy in January, 2010. A list of 174 projects totaling $6 million for energy improvement projects at state facilities is currently pending legislative approval.

Objective:

Develop a plan to reduce peak-load energy consumption in residential, commercial, and industrial customers.

Implementation:

- Work with electric utilities to develop and implement demand response programs such as advanced metering.
- Continue to foster Maine's "ready to respond" capacity.
- Encourage large electricity users to establish "wholesale power purchase accounts".
- Reach out to all commercial, industrial and government customers with a peak demand of 500 kW or greater for participation in peak demand or third party management.
- Develop incentives for large commercial, industrial and government customers.
- Develop incentives for residential customers and customers with a demand of less than 500 kW.
- Determine which rate structures are cost effective to the rate payers.
- Monitor the results of all demand response initiatives through 2012 and implement the most effective mix of action steps in order to achieve a total peak demand goal by 2020.

II. FOSTERING RENEWABLE ENERGY (WIND, SOLAR, TIDAL AND GEOTHERMAL. COGENERATION/TRIGENERATION)

Goal:

Encourage Maine's businesses and residences to invest in distributed renewable generation of energy.

Objective:

Explore creating a "technology neutral" carbon offset incentive program.

Implementation:

- Inventory existing technology incentive programs and index carbon offsets to public grants.
- Create a technology matrix that indexes public grants to the amount of carbon a given technology avoids.

Objective:

Increase the amount of energy that can be credited to an individual or businesses' utility account to encourage private investment in distributed renewable energy.

Implementation:

✓ Work with the Maine Legislature to improve Maine's net metering law to allow for additional energy credits beyond the current twelve months, potential payments and raising the capacity limit to between 2-5 MW.

✓ Explore the technical and economic benefits of "feed-in tariff" policies.

Status: Completed.

LD 336 Resolve, Regarding Legislative Review of Chapter 313: Net Energy Billing Rule To Allow Shared Ownership, a Major Substantive Rule of the Maine Public Utilities Commission (MPUC) was signed into law in 2009 increasing the net-metering threshold to 660 kW from 500 kW. (However, credit beyond twelve months and up to 2-5 MW was not enacted.)

LD 1075 An Act to Establish the Community-based Renewable Energy Pilot Program was signed in to law in 2009 that required the MPUC to establish a community-based renewable energy pilot program to encourage the sustainable development of community-based renewable energy in the State by providing one of two incentives applicable to projects, either long-term contracts or a set renewable energy credit multiplier set at 150% of the amount of the electricity. The MPUC has completed the implementation rules and two projects have been approved.

Objective:

Standardize and streamline grid interconnection standards for distributed renewable energy applications.

Implementation:

- ✓ Continue to work with the MPUC as they investigate improving interconnection standards policy and procedures in Maine.
- ✓ Work with the Maine Legislature to pass an improved interconnection standard law as a result of MPUC recommended policy options.

Status: Completed.

In 2008, the Legislature passed LD 2149 Resolve, To Encourage Renewable Energy and Energy Conservation in Maine. The Resolve directed the MPUC to conduct a review of the advisability of statewide interconnection standards for small renewable generation facilities. The MPUC's report recommended the creation of standardized statewide small generator interconnection standards based on the FERC's Small Generator Interconnection Procedure (SGIP) or a model rule like Interstate Renewable Energy Council's which is closely based on the SGIP. The MPUC has completed rules for a small generator interconnection process.

OEIS recommended in its CHP report that streamlined economic and technical requirements should be implemented to quickly move CHP projects forward in Maine.

Objective:

Increase the development and local ownership of "community energy" in the State.

Implementation:

- ❍ Adopt a generation goal for installation of new community energy in Maine.
- ✓ Create a plan for devising incentives, financing and education and outreach initiatives to promote community energy in Maine.
- ❍ Where applicable and in the public interest, give preference to community energy projects for interconnecting to the grid.

Status: On-going.

LD 1075 An Act to Establish the Community-based Renewable Energy Pilot Program was signed in to law in 2009 that required the MPUC to establish a community-based renewable energy pilot program to encourage the sustainable development of community-based renewable energy in the State.

Objective:

Re-examine the possibility of implementing utility rate de-coupling to encourage distributed generation.

Implementation:

- ❍ Work with the Maine Legislature and the utilities to craft policies to conserve power and to create smart power grids.

Status: On-going.

LD 1535 An Act to Create A Smart Grid Policy in the State was passed into law. The bill established a state policy on smart grid infrastructure to improve power reliability, overall efficiency of the power resource and delivery system while reducing energy consumption, greenhouse gas emissions and cost to consumers.

Goal:

Continue to advance Maine's position as a leader in responsible wind power development and maximize the tangible benefits Maine people receive.

Objective:

Implement the Governor's Wind Power Task Force recommendations by seeking to host at least 2,000 megawatts (MW) of installed wind power capacity by 2015, at least 3,000 MW by 2020, with at least 300 MW of the 2020 goal achieved with projects built offshore. (Public Law 661, 2007.)

Implementation:

- ✓ Track progress toward achievement of state wind energy goals.
- ❍ Conduct a full review of the status of meeting the 2015 wind power goals, and the likelihood of achieving the 2020 goals including permitting, technology trends, implementation success, progress toward meeting

greenhouse gas emission goals, and identification of expedited permitting areas in LURC territory.

✓ Provide on-going recommendations to the Legislature regarding Maine's new wind power law, including any necessary appropriate revisions.

✓ Consideration of whether or not creation of an independent siting authority is advisable.

✓ Work with other State agencies to clarify the benefits of wind power projects and document each wind power project's economic and other benefits.

- Provide a clearinghouse and outreach capability to provide information to the public on current and developing wind technology, available grants, consultants with special expertise, and lists of wind equipment providers.

✓ Aggressively pursue development of Maine's offshore wind potential.

✓ Coordinate with other state agencies to track technical advances in the wind energy industry with an eye toward potential regulatory and/or policy implications.

Status: On-going.

OEIS reports annually to the Utilities, Energy and Technology Committee on how the state is meeting its wind energy development goals and on tangible benefits received as a result of wind energy development projects.

Objective:

Continue working to provide financial incentives for the development of wind power in Maine.

Implementation:

✓ Continue funding the wind power rebate program and wind power pilot project to provide incentives to homeowners and small businesses to develop micro-wind power in Maine.

- Work with the Legislature to provide Business Equipment Tax Rebate (BETR) treatment for wind generating equipment above the appliance size.
- Work with the Maine Revenue Service and the Legislature to provide a sales tax exemption for all small and community wind power equipment.

✓ Work with Maine's Congressional delegation to secure extension of the federal wind production credit.

Status: On-going.

The small wind power rebate program administered by the Efficiency Maine Trust has been enhanced with $500,000 in additional funding from the ARRA for two years.

With input from the OEIS to Maine's Congressional delegation, the federal Production Tax Credit has been extended until 2012.

Objective:

Determine opportunities for the development of wind power by the State's agencies, political subdivisions, and rural electric cooperatives. (Public Law 2008, Ch. 671.)

Implementation:

- ✓ Monitor developments in technology in state and federal law to determine wind power opportunities for the above jurisdictions.
- ✓ Inform the Energy Resources Council of findings.
- ❍ Develop information resources to asst the State's political subdivisions, rural electric cooperatives, and other municipal entities to develop, design, construct, install and finance wind and other renewable electricity generation projects.
- ✓ Form one or more advisory groups to advise OEIS in undertaking the above responsibilities.
- ✓ Report to the Utilities and Energy Committee annually of the OEIS' progress on the above implementation measures and provide a recommendation on potential legislation to continue these efforts.

Status: On-going.

OEIS has convened an advisory committee and begun work on developing informational resources, secured grant funding to hire a consultant to begin work on this project in February, 2010. Several workshops were held at the 2nd Annual Wind Energy Conference in Maine focusing on the development of small, medium small-scale commercial wind projects.

Objective:

Work with the Governor's Ocean Energy Task Force, (OETF) relevant state agencies and private developers to foster education, awareness of and advocacy support for near-shore and off-shore wind power development in Maine.

Implementation:

- ✓ Participate in the Governor's OETF with the purpose of exploring opportunities for near-shore and off-shore wind development and making recommendations to streamline the regulatory process.
- ✓ Work with relevant state agencies to promote the June, 2009 Ocean Energy Conference to be held in Maine.
- ✓ Partner with the University of Maine, Orono, non-profit organizations and the private sector to foster short-term opportunities for the development of near-shore and off-shore wind power development.

Status: on-going.

The Governor's Ocean Energy Task Force produced its final report in January, 2010 recommending passage of two bills. The first, LD 1465 An Act To Facilitate Testing and Demonstration of Renewable Ocean Energy Technology, included a public process in which three testing and demonstration sites were to be chosen. As a result, the following three sites were chosen: Boon Island, Damariscove Island, and Monhegan Island.

The second, LD 1810, An Act to Implement the Recommendations of the Governor's Ocean Energy Task Force, clarified and streamlined the permitting and leasing processes for renewable ocean energy projects. The law also directed the MPUC) to issue a competitive solicitation in the fall of 2009 for a long-term contract for up to 25 MW of deep-water wind energy and 5 MW of tidal power, subject to a statutorily-set price cap. The RFP solicitation is due in May, 2011.

The Maine Department of Community and Economic Development and other state agencies will host and promote the second Ocean Energy Conference to be held in Portland in June, 2011.

Informational meetings have been held with several near-shore, off-shore wind developers interested in developing projects off the coast of Maine.

Goal:

Work with State agencies, the Governor's Ocean Energy Task Force, Maine Maritime Academy (MMA) and private developers to promote tidal power in Maine.

Objective:

Coordinate with the Governor's Ocean Energy Task Force and relevant state agencies to review available research on "tidal technologies" and create a decision chart for applications.

Implementation:

- Research and compile data on large-scale tidal technologies.
- Research and compile data on medium-scale tidal technologies.
- Research and compile data on micro-scale tidal technologies.
- Create a suitability-to-application chart for tidal technology in Maine.
- Create permitting process primer.
- Create a listing of public funding opportunities for tidal technology in Maine.

Objective:

Coordinate with Maine Maritime Academy on the Tidal Device Evaluation Center's (TEDEC) proposed project in Castine, Maine.

Implementation:

- Participate in TEDEC's Working Group.
- Work with tidal power developers to identify appropriate technologies and sites for tidal power projects in Maine.

Status: On-going.

OEIS has been monitoring the work of the TEDEC.

Objective:

Create economic impact overview for tidal power development in Maine.

Implementation:

- Coordinate with MMA on research and certification program (DOE and private funding).
- Promote manufacturing sector of tidal power technologies.
- Establish Maine as a leader in tidal power technology certifications.
- Establish Maine as a leader in tidal power consulting services and research and development.

Objective:

Create public private partnerships in Maine with national and international tidal power companies.

Implementation:

- Where feasible, list all companies investing in tidal power in North America.
- Explore the creation of a tidal power manufacturing sector in Maine.
- MMA research and certification program (DOE and private funding).
- Establish Maine as a leader in tidal power technology certifications.
- Establish Maine as a leader in tidal power consulting services and research and development.

Status: On-going.

The Department of Environmental Protection coordinated an MOU with the Federal Department of Energy and the State of Maine to encourage tidal development in Maine.

OEIS is monitoring the work of the University of Maine, Orono's Maine Tidal Power Initiative.

Goal:

Work with State Government to adopt an overall goal of new, renewable power generation at State facilities.

Objective:

Work with Bureau of General Services (BGS), Maine Department of Transportation (MDOT), Maine Department of Education (MDOE), and other relevant State agencies to develop an aggressive plan for investing in the generation of clean renewable power at State facilities.

Implementation:

- ✓ Create an up-to-date data-base of existing facilities and their energy profiles.
- ✓ Reduce the State Government's dependence on oil by expanding the use of biomass and biofuels at State facilities.
  - ❍ Develop screening criteria for identifying appropriate projects.
  - ❍ Continue effort to use biomass and "bio-oil" at certain State facilities.
- ✓ Continue efforts to site small wind, solar and geothermal energy systems at State facilities.
- ✓ Pursue implementing co-generation plants at State facilities.
- ✓ Seek a substantial increase in funding for renewable energy upgrades through a substantial bond issue or other funding mechanism.

Status: On-going.

BGS has developed a database of energy usage for fuel oil, electricity, natural gas, propane and wood for state facilities. It is now possible to track energy usage and identify savings through large purchase contracts over standard rates.

Reporting on the above implementation measures is included in the final report of the Task Force to Advance Energy Efficiency, Conservation and Independence at State Facilities presented to the Joint Standing Committee on Utilities and Energy in January, 2010. A list of 174 projects totaling $6 million for energy improvement projects at state facilities is currently pending legislative approval.

Goal:

Seek to develop on-site clean, renewable energy projects at appropriate state facilities.

Objective:

Work with BGS, MDOE, MDOT, DOC and other state agencies to develop an aggressive plan for investing in clean renewable power at state facilities.

Implementation:

- ❍ Create an up-to-date data-base of existing facilities and their energy profiles.
- ❍ Develop screening criteria for identifying appropriate projects.

- Seek a dramatic increase in funding for energy upgrades through a substantial bond issue or systems or other funding mechanism.

Status: In-progress.

BGS has developed a database of energy usage for fuel oil, electricity, natural gas, propane and wood for state facilities. It is now possible to track energy usage and identify savings through large purchase contracts over standard rates.

A number of renewable projects have been or are in the process being implemented at state facilities. These include: a geothermal plant was installed at the Skowhegan State Police barracks, and construction of a cogeneration facility is underway at the East Campus. A wind energy study was underway at the Mountain View Youth Development Center but has been put on hold pending approval of the new Administration and a biomass plant at Mountain View Youth Development Center was to be completed in 2011 but the vendor did not have the capital so the project has been discontinued.

Objective:

Continue to work with BGS, Department of Corrections and other state agencies to select a site suitable for micro-wind power.

Implementation:

- Obtain site plan for and determine best location for micro-wind site.
- Collect technical data for selected site including power interconnection and layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

Status: On-hold.

A wind energy study was underway at the Mountain View Youth Development Center but has been put on hold pending approval of the new Administration.

Objective:

Work with BGS and other state agencies to select a site suitable for solar thermal application.

Implementation:

- Obtain site plan for and determine best location for solar thermal site.
- Collect technical data for selected site including power interconnection and layouts.
- Perform precursory design to create project scope, budget and potential savings.

- ❍ Create project presentation for approval and funding by BGS or other agencies.

Objective:

Work with BGS and other state agencies to select a site suitable for geothermal energy application.

Implementation:

- ✓ Obtain site plan for and determine best location for geothermal site.
- ✓ Collect technical data for selected site including power interconnection and layouts.
- ✓ Perform precursory design to create project scope, budget and potential savings.
- ✓ Create project presentation for approval and funding by BGS or other agencies.

Status: Completed.

A geothermal plant is in operation at the Skowhegan State Police barracks.

Objective:

Coordinate with the Department of Environmental Protection (DEP) and other state agencies to lead a stakeholder group to identify potential areas of concern with regard to groundwater and surface water resources from potential sources of pollution related to geothermal siting and operations.

Implementation:

- ✓ Include representatives of the geothermal design, installation, and well drilling industries, the Maine Groundwater Association, and other appropriate parties.
- ✓ Identify areas of concern in the potential siting and operation of geothermal heating systems.
- ✓ Explore and consider statutory changes to the responsibilities of the Well Drillers' Commission, current DEP rules, and the establishment of standards and guidance for future geothermal development.

Status: Completed.

As a result of the stakeholder group and LD 860 An Act Relating to Geothermal Heat Exchange Wells, geothermal heat exchange wells are now under the responsibility of the Maine Water Well Commission (in order to protect groundwater from contamination). By January 1, 2010, the Maine Water Well Commission was required to provisionally propose initial rules to the Legislature for review by the Joint Standing Committee on Natural Resources establishing rules for a licensing structure for geothermal heat exchange well drillers and geothermal heat exchange well pump

installers and other laws applicable to well drillers and pump installers. LD 174 Resolve, Regarding Legislative Review of Portions of Chapter 232: Well Drillers and Pump Installers Rules, a Major Substantive Rule of the Department of Health and Human Services is currently pending before the Natural Resources Committee.

Objective:

Investigate the integration of carbon sequestration technology at a state facility.

Implementation:

- Select one state facility in Augusta and obtain all process and technical data.
  - -- Boiler nameplate
  - -- Fuel: Type and quantity
  - -- Stack data and physical sight equipment footprints
- Pre-engineer the chosen site for installation of carbon sequestration technology.
- Create and issue a project proposal for application including carbon credits.
- Implement the project and monitor emissions performance.

Goal:

Work with public and private schools across the state to facilitate energy alternative demonstration projects.

Objective:

Work with the BGS and Maine School District Superintendents to create a grant program to be housed in the new energy efficiency, conservation and weatherization entity for energy upgrades for public and private schools to upgrade their energy systems.

Implementation:

- Create a master database of schools and their energy profiles.
- Create a prioritization matrix for energy upgrades.
- Secure funding for grant program through energy efficiency entity.

Objective:

Remove outdated regulations that stand as barriers to alternative energy projects in schools.

Implementation:

- Work with BGS staff and school facilities directors to understand regulatory environment.
- Work with the Fire Marshal and the office of financial regulation to understand intent behind regulation.
- Create legislative recommendations to modernize regulator environment.

Objective:

Perform research to determine one Maine school suitable for wood chips/wood pellets.

Implementation:

- Obtain technical and energy data from school selected.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

Objective:

Perform research to determine one Maine school suitable for geothermal energy.

Implementation:

- Obtain technical and energy data from school selected.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

Goal:

Support research at the University of Maine to create cellulosic ethanol from paper making waste.

Objective:

Strengthen the relationship with the University of Maine and their partnership with private companies in the development of ethanol from paper making waste.

Implementation:

- Coordinate resources for research endeavors with State and Federal agencies.
- Foster public/private sector partnerships/alliance for ethanol from pulp project.
- Support existing funding resources from Federal, State and private sector that support the Universities' efforts on the ethanol from pulp project.

Goal:

Assist in the development of bio-fuel and bio-mass energy plants using Maine renewable resources.

Objective:

Continue working with biomass and bio-oil companies on pilot projects.

Implementation:

- ❍ Continue working with biomass and bio-oil companies and collaborate on efforts for Maine.
- ❍ Create an action plan for biomass and bio-oil "off-take" projects in Maine and coordinate a site visit to biomass and bio-oil refineries with state and business leaders.
- ❍ Coordinate with the private sector regarding bio-oil transportation and distribution.
- ❍ Create project lists for fuel-oil to biomass or bio-oil conversions at State facilities.
- ❍ Prioritize the list.
- ❍ Research and coordinate DOE funding for piping retrofits.
- ❍ Create detailed project implementation schedule for all approved projects.
- ❍ Create and facilitate measurement and verification protocol for savings and emissions.

Status: On-going.

OEIS is working with the USDA through the federal renewable fuels standard to advance Maine's mission to develop and use clean, sustainable biofuels produced in the State.

Objective:

Work with the DOC regarding biomass and bio-oil refineries using indigenous Maine fiber.

Implementation:

- ✓ Work with DOC regarding a biomass and bio-oil refinery.
- ✓ Obtain all metrics for state owned woodlands considered for refinery fiber.
- ❍ Present project model to biomass and bio-oil companies for evaluation of potential State bio-mass and bio-oil refinery.

Status: On-going.

Department of Conservation (DOC) continues to work with OEIS and provide businesses interested in locating bio-oil refineries in Maine with information on the availability and sourcing of sustainable fiber and market history of fuel sources. DOE has gathered information regarding sustainable harvest levels on DOC owned/managed forestland.

Objective:

Select a Maine State facility to switch to 100% biomass or bio-oil for heating.

Implementation:

✓Continue working with BGS to select state facilities for migration from fuel-oil to biomass or bio-oil for heating.

✓Obtain existing fuel oil usage data and physical plant data.

✓Perform site audit to obtain site specific technical data and physical layouts.

✓Perform precursory design to create project scope, budget and potential savings.

✓Create project presentation for approval and funding by BGS or other agencies.

Status: On-going.

The Charleston Correctional Facility currently has two biomass boilers that burn approximately 1,200 cords of wood per year.

A biomass plant was to be installed at Mountain View Youth Development Center in Fiscal Year 2011 but the project has been discontinued due to the vendor running out of capital.

BGS tested bio-oil in 2008 but it did not prove viable and is not being used at this time.

Objective:

Select a Maine State facility to switch bio-mass tri-generation or cogeneration.

Implementation:

✓Work with BGS to select one state facility that is suitable for bio-mass energy projects.

✓Perform site audit to obtain site specific technical data and physical layouts.

✓Perform precursory design to create project scope, budget and potential savings.

✓Create project presentation for approval and funding by BGS or other agencies.

Status: on-going.

BGS has completed a study for the State's East Campus for a cogeneration facility. A contract is currently under development and construction is expected to be completed by January 2012. Wood pellets will be the primary fuel source, replacing number 2 heating oil and a 50-year old boiler will be replaced with a 330 kW turbine to generate electricity for all of the East Campus buildings.

Objective:

Encourage private sector investment in bio-mass tri-generation or cogeneration facilities.

Implementation:

- Research and determine one private sector application for bio-mass tri-generation.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

Objective:

Research and create a pilot project for a neighborhood to convert from fuel oil to bio-mass or bio-oil.

Implementation:

- Research and identify a Maine neighborhood pilot project for biomass or bio-oil conversion.
- Create action plan for neighborhood bio-oil conversion.
- Facilitate stake-holders roundtable to discuss action plan for conversion to bio-oil.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by stake holders and homeowners.

Goal:

Increase use of bio-fuels and alternative energy in state-occupied buildings.

Objective:

Continue working with BGS and other relevant state agencies to monitor one state building's use of and eventual conversion to biomass or bio-oil.

Implementation:

- ✓ Continue discussions between biomass or bio-oil vendor and BGS staff.
- Work with BGS and other relevant state agencies to develop detailed scope of work and budget for biomass or bio-oil retrofit project.
- Obtain five years of fuel usage, electric usage, degree days and occupancy data.
- Create monitoring protocol for measurement and verification.
- Create monthly reports on performance.
- Create final report of findings and issue to OEIS and BGS.

Status: On-going.

A biomass plant was to be installed at Mountain View Youth Development Center in Fiscal Year 2011 but the project has been discontinued due to the vendor running out of capital.

BGS tested bio-oil in 2008 but it did not prove viable and is not being used at this time.

Objective:

Work with BGS and other relevant state agencies to identify state facility for bio-mass application *(wood pellet or chips).*

Implementation:

- Identify one State facility that will switch to bio-mass for heating fuel.
- Create detailed scope of work and budget for bio-mass retrofit project.
- Obtain five years of fuel usage, electric usage, degree days and occupancy data.
- Create monitoring protocol for measurement and verification.
- Create monthly reports on performance.
- Create final report of findings and issue to OEIS and BGS.

Goal:
Assist public schools with converting from fossil fuels to bio-fuels.

Objective:

Research and select one school district for conversion from fuel oil to biomass or bio-oil.

Implementation:

- Select one school that is suitable for fuel oil to biomass or bio-oil conversion.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

Goal:
Encourage the development of ethanol-blend fueling stations.

Objective:

Facilitate a roundtable discussion with major transportation fuel companies.

Implementation:

- Research ethanol-blend fueling stations and demand for Maine.
- Create roundtable agenda and invite stakeholders.
- Facilitate roundtable discussions on ethanol-blend fueling stations in Maine.

- Document meeting notes and identified concrete action plan items.
- Create a report of findings for OEIS Director with recommendations for improvement.

Objective:

Explore the potential for development of E-85 ethanol-blended fuel pumping stations in Maine.

Implementation:

- Create a 10-year plan to encourage the development of ethanol pumping stations in Maine.
- Encourage the development of markets for the future production of cellulosic ethanol.

Goal:

Increase the development and use of cogeneration and tri-generation in the State of Maine.

Objective: OEIS, in conjunction with the private sector, Executive Department, utilities and the Energy Resources Council, will undertake a project to examine opportunities for, eliminate barriers to, and create incentives for the installation of energy systems that conserve energy through the reuse of waste heat (cogeneration). (Resolve 183, 2008.)

Implementation:

- ✓ Identify all barriers and opportunities to private and government sector investment in tri-generation/cogeneration.
- ✓ Identify all current regulations related to the development of cogeneration/tri-generation.
- ✓ Work with private stakeholders and government regulators to identify barriers and develop solutions.
- ✓ Obtain input from key utility leaders in Maine on cogeneration/tri-generation.

Status: Completed.

OEIS created and led a Combined Heat and Power (CHP)/Waste Heat Recovery Task Force that addressed the above issues. The final report addressed the above implementation measures and issues, outlined incentives for CHP projects and recommended policy and program options to encourage CHP in Maine buildings and factories. The final report was submitted to the Utilities and Energy Committee in July, 2010.

Objective:

Identify tax and other financial incentives and potential policies to encourage the development of cogeneration/tri-generation systems.

Implementation:

✓ Identify all current incentives related to the development of cogeneration/tri-generation.

✓ Work with private stakeholders and government regulators to identify incentives, examine technical and policy issues to encourage cogeneration and tri-generation systems.

Status: Completed.

The above implementation measures and issues were covered in the work of the Combined Heat and Power (CHP)/Waste Heat Recovery Task Force and are included in the final report.

Objective:

Submit a report to the Utilities and Energy Committee by December 1, 2009 that includes findings and recommendations regarding energy conservation through the reuse of waste heat (cogeneration and tri-generation). (Resolve 183, 2008.)

Implementation:

✓ Establish a working group of private and government stakeholders to establish findings and legislative recommendations to encourage the use of waste heat (cogeneration and tri-generation) in both the government and the private sectors.

Status: Completed.

The above implementation measures and issues are covered in the work of the Combined Heat and Power (CHPWaste Heat Recovery Task Force and were included in the final report.

Objective:

Identify and initiate a cogeneration/tri-generation project at one hospital; one industrial site; and one multi-unit housing site.

Implementation:

- Investigate low cost project funding sources with existing public and private sources.
- Explore the creation of new funding through either a bond issue or other funding mechanism.
- Create site selection process and initiate dialogue with industrial, housing and hospital sectors.
- Create partnerships with private enterprise to create "Volunteer Project Teams" to perform preliminary work scope at no cost up front until project is

funded. Teams will provide pre-engineering, feasibility studies and detailed scopes and cost estimates.
- Publicize each phase of the project implementation with media and Governor.
- U.S. EPA to provide certificate of emissions reduction; ribbon cutting, education and outreach.

Objective:

Educate State and private business leaders about the cogeneration/tri-generation energy model using the U.S. Environmental Protection Agency's Combined Heat and Power (CHP) "Partnership Educational Outreach Program".

Implementation:

- Work with the U.S. EPA to hold an educational and outreach forum on cogeneration/tri-generation.
- Develop an OEIS "Energy 101" fact sheet on cogeneration/tri-generation and post on website.

Status: On-going.

OEIS and the EPA CHP Partnership arranged for an outreach, education and award event at Eastern Maine Medical Center for January 2011.

Goal:

Encourage the strategic location and development of industrial and district heating energy generation clusters.

Objective:

Create State-wide map of industrial facilities and potential district heating energy plants and "bubble" target areas for "Eco-Park" sites like BNAS Redevelopment, Madison's "Backyard Beauties", Auburn Industrial Park, City of Brewer, Bangor Air-port Complex, Millinocket, Saco-Island, and others.

Implementation:

- Create state-wide map of industrial and potential district heating power plant sites.
- Identify electrical and thermal energy used by each industrial site.
- Identify merchant plant capacity and fuel types.
- Identify potential clusters for existing and future growth areas.
- Create list of areas where a district heating or "Eco-Park" would work for private or public tri-generation facility using biomass or another fuel source.
- Create priority list for three sites to pursue for development of a district heating or Eco-Park.

Objective:

Create project team for the pre-development of one district heating or Eco-Park site.

Implementation:

- Perform pre-engineering feasibility study for a district heating or Eco-Park location selected.
- Create "Volunteer Project Team" to perform preliminary work scope at no cost up front until project is funded. Team will provide pre-engineering, feasibility studies and detailed scopes and cost estimates.
- Publicize each phase of the project implementation with all media and Governor.

Goal:

Assist the University of Maine and other colleges with the use of bio-mass/bio-fuel cogeneration and tri-generation energy systems.

Objective:

Create an educational forum for Universities and Colleges regarding bio-fuel applications.

Implementation:

- Utilize U.S. EPA's "CHP Training Programs" for forum on tri-generation energy model.

Objective:

Select one site for bio-mass tri-generation application.

Implementation:

- Research one college that is suitable for bio-mass tri-generation.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding college or other agencies.

Objective:

Work with one college in Maine to switch from fuel oil to biomass or bio-oil usage.

Implementation:

- Research one college that is suitable for switching from fuel oil to biomass or bio-oil conversion.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.

- Create project presentation for approval and funding by college or other agencies.

Goal:

Increase the generation of renewable power into the State of Maine's electricity portfolio.

Objective: Increase the existing Renewable Portfolio Standard (RPS) requirement in Maine above the existing requirement of 10% of new renewable energy by 2017.

Implementation:

- Develop a solar power energy goal and achieve that goal by 2020 as part of the State's RPS.
- Develop a biofuels energy goal and achieve that goal by 2020 as part of the State's 2020 RPS.
- Increase support for "community-owned" energy and include a 1% carve out in the RPS.
- Meet the State's wind power goals by 2020.
- Increase the RPS requirements starting in 2017 to 25% by 2030.

III. IMPROVING TRANSPORTATION AND FUEL EFFICIENCIES

Goal:

Support and enhance state and private sector efforts for education and awareness of alternative transportation options and promotion of a low-carbon fuel standard and fuel efficient vehicles.

Objective:

Work with MDOT, GOMAINE, the private and public transportation sectors, and the auto and truck industries to continue outreach campaigns on alternative transportation options and fuel efficient vehicles.

Implementation:

- ✓ Continue "Share Your Ride" statewide PSA campaign to promote ridesharing and carpooling.
- ✓ Continue statewide radio campaign for the GO Maine program to promote the state's vanpool program.
- ✓ Work with private employers, transit providers and the media to promote alternative transportation options.
- ✓ Continue to provide fuel-wise and fuel-efficient vehicle tips to the public.

✓ Provide information on park-and-ride lots to the public.

✓ Increase awareness of transit commuter benefits to employees and employers, and thus transit use, through the "Commuter Choice Pre-Tax" program.

✓ Work with transit providers and MDOT to continue "Free Fare Fridays".

- ❍ Utilize Variable Message Signs (VMS) on highways to reach tens of thousands of commuters and other travelers to generate public awareness of alternative transportation tips and options.

Status: On-going.

A park and ride website is in operation. Free Fare Fridays has been discontinued in light of participation in the GO Maine Nation campaign.

Objective:

In collaboration with DEP, monitor and coordinate state policy and programs to encourage adoption of a low-carbon fuel standard and reduction of vehicle miles traveled in the State.

Implementation:

- ❍ Participate in the State's Climate Action Plan's "VMT group" and report to the Legislature on annual progress made and make recommendations on potential future policies.

Goal:

Support state programs that encourage the use of carpools, vanpools, car-sharing and telecommuting.

Objective:

Work with MDOT, GO MAINE, other state agencies and the private sector to expand existing commute options.

Implementation:

✓ Continue to increase the GO Maine commuter database and expand the GO Maine web-based/real-time "Trip Planner".

✓ Continue to add GO Maine commuter vans beyond the current 12 for ride-sharing.

- ❍ Actively recruit car-sharing companies to locate and provide services in Maine.
- ❍ Expand existing state telecommuting policy beyond the existing pilot program.

✓ Encourage state and private employees to take advantage of telecommuting programs.

- Investigate the use of private sector vans and busses for additional vanpool and transit capacity.
- Consider implementing a statewide electronic fare card for use on all transit.

✓ Promote the use of preferential parking to reward carpools, vanpools and car-sharing participants.

- Investigate requiring Transportation Demand Management Associations in large population centers to encourage alternative transportation programs for large employers.

Status: On-going.

The GO Maine database has expanded to over 8,600 registered participants and the GO Maine van fleet has increased to 32 vehicles.

Portland transit providers are investigating the use of a statewide electronic fare card for use on all transit. A car-share company has located in Portland and several University of Maine campuses.

Goal:

Support state transportation investments and encourage private investment for enhanced passenger and freight transportation systems.

Objective:

Work with MDOT, the Northeast Passenger Rail Authority, other railroads and the private sector to prioritize transportation investments in passenger transit and rail infrastructure.

Implementation:

- Make transit and rail a higher priority in all State transportation planning and funding requests.
- Increase transit capacity (more buses, more frequency) and upgrade existing fleet.
- Implement a "customized transit" approach in rural areas ensuring flexibility that incorporates an internet-based system to connect riders with transit providers.

✓ Work with the Maine Congressional Delegation and the Obama Administration to actively pursue federal funding for transit, rail and other transportation-related program funding.

- Investigate potential bonding to fund rail and transit expansion projects.
- Amend state Tax Increment Financing (TIF) rules to include the use of funds for transit operating and development of transit-oriented developments.
- Streamline the State transit procurement process to ensure timely delivery of new busses.
- Investigate building and manufacturing transit buses in Maine.

✓Continue to work toward expanding the Downeaster train to Freeport, Brunswick and beyond.

- ❍ Augment the passenger rail network on the Downeaster route with additional stops at strategic locations along the way, using self-propelled cars.

✓Continue working with the Northern New England Passenger Rail Authority to increase routes and capacity on the Downeaster.

- ❍ Pursue rebuilding the Portland-Westbrook section of the Mountain Division railroad to be developed into a commuter rail and freight rail corridor.

Status: On-going.

$35 million in ARRA funds were awarded to the State of Maine for expansion of the Downeaster train service from Portland to Brunswick for service by 2012.

Objective:

Work with MDOT and freight railroads to prioritize investments in freight transportation.

Implementation:

✓Continue the Industrial Rail Access Program that provides immediate relief for businesses in need of connections to railroads.
Continue the Local Freight Rail Assistance Program that provides loans to owners of property adjacent to rail lines and railroads to improve their access to rail service.

✓Implement the Truck Efficiency Tax Incentives Program that provides incentives for small fleet motor carrier operations to save energy by improving fuel efficiency, reducing emissions, reducing idling, speed controls, advanced tire technology, advanced lubricants, and empty weight reductions.

✓Continue to advocate for a 100,000 lb. federal weight limit for Maine Interstates in order to provide relief to Maine shippers and truckers at no cost to increase payload productivity up to 44% and reduce fuel consumption per loaded ton. .

✓Continue funding rail/truck intermodal facilities that reduce highway congestion and give shippers another cost-effective option to move their products. on-going.

✓Work to re-open the Lewiston Lower Road rail line to the Lisbon Industrial Park. Opened the rail line from Brunswick to Topsham.

- ❍ Explore implementing new technology for freight trucks' on-board systems for anti-idling through public/private partnerships including but not limited to Maine Motor Transport driver training programs.

Status: On-going.

The approved November, 2009 bond measure included $1 million for the Industrial Rail Access Program, loans for the Local Freight Assistance Program were made available in 2009 and the Lewiston Lower Road rail line was opened and extended from Brunswick to Topsham. The Truck Efficiency Tax Incentives Program is being implemented in private fleets.

Secured temporary Congressional authorization for a 100,000 lb. federal weight limit for Maine Interstates in order to provide relief to Maine shippers and truckers at no cost to increase payload productivity up to 44% and reduce fuel consumption per loaded ton.

Secured negotiations for the acquisition of the Montreal Maine and Atlantic Aroostook rail corridor.

The 2010 June bond provided State funding for the MMA line purchase. A $10.5 million Tiger II award was received for track upgrades.

Objective:

Work with MDOT, local transit providers and municipalities to prioritize transportation investments in bike and pedestrian infrastructure.

Implementation:

- Allow bikes on transit buses and trains.
- Stretch federal funding for bike amenities – 50% match for private sector, 20 to 30% match for public sector.
- Fast-track pedestrian improvements that allow better access to transit such as signs and cross-walk striping.
- Require bike racks or bike parking amenities for all new development permits.
- Aggressively pursue funding for additional bike lanes in urban areas.
- Fast-track Safe Routes to School funding to reduce the huge amount of driving and cost for getting kids to school by buses and private cars. Improve the conditions for walking and cycling around urban and suburban schools, including sidewalks and cycling facilities, organize walking school buses and other human powered options.

Status: On-going.

All state owned buses are being purchased with bike racks. The State of Maine continues to work in partnership with federal and local partners to create strategic improvements on bicycle and pedestrian connections through improved planning and infrastructure improvements. Maine's bike parking program assists local municipalities, businesses, schools, etc. with the purchase of bike racks. Communities throughout the state continue to work on improving transportation safety and access for pedestrians.

The federally funded Maine "Safe Routes to School" program continues to fund infrastructure safety improvements around schools and assists in helping schools create "walk and bike to school" safety and encouragement programs.

A study is under development to determine priorities for improving pedestrian connections to transit stops in the Greater Portland Region.

Objective:

Work with MDOT, other relevant state agencies and the private sector to increase the use of alternative transportation fuels, including a low-carbon fuel standard (LCFS).

Implementation:

- Develop a strategic plan to expand alternative fuel refueling infrastructure throughout the State.
- Continue working with the 10 "RGGI" states to implement a low-carbon fuel standard.
- Work with local utilities and Compressed Natural Gas (CNG) refueling station providers to identify and contact potential users of CNG refueling infrastructure with the goal of developing sufficient demand to support a second publicly accessible fast fill CNG refueling station in Portland.
- Work with State agencies to place additional alternative fuel vehicles in the state fleet.
- Work with school districts and other stakeholders to encourage use of alternative fuel vehicles and alternative fuels as appropriate in school bus fleets.
- Develop greater fuel diversity for public transit, public works, state and private fleets to avoid dependency on one fuel when prices increase.
- Explore the viability of converting sewage treatment gases (biogas) into methane for pipeline use and/or in stationary and vehicle engines. This has the added advantage of reducing harmful green house gases emitted by sewage treatment facilities.
- Work with propane providers and interested fleets, especially in rural areas where propane is the alternative fuel of choice, to build propane fueling infrastructure and purchase the vehicles to support it.
- Expand incentive program to communities to purchase clean fuel vehicles. (MDOT has increased the state match of federally funded projects to 15%, reducing the local share to 5%.)
- Reinstate State tax incentives for the purchase of biodiesel fuel and the purchase of hybrid cars.

Status: On-going.

DEP is working as part of an 11-state regional coalition on the establishment of a Low Carbon Fuel Standard (LCFS) for the region.

In December 2009, Maine signed an MOU with 11 states (10 RGGI states plus Penn) to continue pursuing the development of a LCFS, agreed to do a comprehensive economic analysis of a potential program, a timetable to complete the action steps, and a regulatory program framework. The economic analysis and the draft framework will be reviewed by the states in 2011.

Goal:

Encourage greater coordination of land use and transportation policy to reduce vehicle miles traveled and decrease greenhouse gas emissions.

Objective:

Work with other state agencies and non-profit organizations to identify and implement key land use planning policies that promote "smart growth" through the development of mixed-use, compact development.

Implementation:

- ❍ Locate new housing developments near transit and existing services.
- ✓ Work with and provide incentives to developers that promote "smart growth".
- ✓ Support "smart growth" policies that discourage sprawl development.
- ❍ Support "location efficient" mortgages that provide incentives for living near jobs and services.
- ✓ Support "asset based plans" for the six regional economic districts based on identified critical quality of place assets in each district that reduce sprawl and promote local downtowns.
- ❍ Develop a model ordinance that encourages mixed-use development and provides alternatives to driving.
- ❍ Require large commercial and development projects to locate in "designated growth areas" or close to existing infrastructure.
- ❍ Require large residential subdivisions to be located in "designated growth areas", close to existing infrastructure or be a conservation subdivision.
- ❍ Require schools to be located in "designated growth areas" or close to existing infrastructure.

Status: On-going.

State Planning Office continues to promote smart growth through the comprehensive planning process by providing technical assistance and comprehensive planning to local communities. In 2009, the SPO completed a publication, http://www.maine.gov/spo/landuse/docs/traditional_neighborhood_handbook.pdf" Creating Traditional, Walkable Neighborhoods: A Handbook for Maine Communities, which promotes smart growth elements of compact neighborhood design, walkability, and community character.

SPO and MeDOT are collaborating on regional efforts to link land use and transportation planning. The Gateway 1 Project has evaluated the land use and transportation issues along the Route 1 corridor between Brunswick and Stockton Springs. Currently, the towns along the corridor are working toward adopting and implementing strategies from the Gateway 1 plan. The Gorham East-West study is also looking at the link between land use and transportation issues. It is at a much earlier stage in the study and planning process.

Asset-based inventories of the State's economic development districts are being planned and taking place as a part of the 'Mobilize Maine' effort.

Discussion is underway to include in Site Law that large residential subdivisions be located in "designated growth areas".

Objective:

Work with other state agencies and non-profit organizations to identify and implement key transportation planning policies that promote "smart growth" through the use of transit-oriented development.

Implementation:

- ✓ Encourage "walkable access" in existing transit corridors to be included in State comprehensive plans.
  - Do a planning assessment of existing and future transit corridors for their Transit Oriented Development potential.
  - Target transportation investments in growth areas to spur efficient patterns of development, encourage infill and redevelopment.
  - Develop a model "parking reduction "ordinance that allows for fewer parking spaces at new developments located near transit.
  - Develop a model "trip-reduction" ordinance to provide incentives to locating new development on transit routes and/or in walkable downtown districts.
  - Require smart growth policies be in place before large transportation investments are made.
  - Revise and enforce school siting policies to recognize the qualitative benefits of rehabilitating and modernizing existing neighborhood schools and avoiding greenfield school construction that often increases transportation.
  - Allow local or Regional Option Taxes that allow municipalities and/or regions to enact sales tax add-ons to fund local transportation projects and pay operating costs of transit.

Status: On-going.

"Walkable access" is included in Chapter 208, the State's comprehensive planning rule.

Title 30-A sections 5223, 5224 and 5225 allow for the development of a Transit Oriented Development TIF District. This statute enables municipalities to use TIF

revenue for new or expanded transit functions, including difficult to obtain operational costs.

LD 846, Resolve, Directing the Department of Transportation (DOT) to Study Ways to Reduce Energy Use and Promote Efficiency along Major Transportation Corridors, was passed in 2009 and a final report to the Joint Standing Committees on Transportation and Natural Resources was completed in 2010.

Objective:

Research forest products' industry mileage traveled between resource and process.

Implementation:

- Survey major stakeholders to determine transportation profiles.
- Compile all data into spreadsheet and analyze.
- Create a report of findings for OEIS Director with recommendations for improvement.

Goal:

Support public-private partnerships to develop "explorer" transit systems for tourist destinations.

Objective:

Coordinate and facilitate a roundtable discussion with stakeholders for explorer transit.

Implementation:

- Create agenda for roundtable and invite stakeholders to attend.
- Use Acadia National Park as the "explorer" model for other tourist-based destinations in the state.
- Facilitate roundtable and document findings and concrete action items.
- Issue report to on roundtable event.

IV. UPGRADING ELECTRICITY AND NATURAL GAS SERVICES, TRANSMISSION SYSTEMS AND INFRASTRUCTURES

Goal:

Support the development of electrical transmission projects in Maine for increased reliability and to accommodate new Maine-based wind power from both on-shore and off-shore projects.

Objective:

Work with Maine utilities and interested parties to obtain "socialized" and other collaborative means of funding from the ISO-NE for proposed electrical transmission projects.

Implementation:

- ✓ Continue working to support policies at the ISO-NE for "socialized" transmission funding in New England.
- ✓ Facilitate discussions with Maine utilities and interested parties to determine action for project support among other New England states.
- ✓ Continue to encourage all parties to explore mutually beneficial, alternative funding mechanisms for transmission funding in New England.

Status: On-going.

The MPUC is involved in a number of ISO-NE Committees where they advocate for "socialized" transmission funding in the region.

OEIS communicates frequently with Maine utilities and other interested parties to monitor project support for transmission projects among New England states.

OEIS and MPUC are Maine representatives on the Eastern Interconnection States' Planning Council (EISPC) to ensure electric resource and transmission planning, scenarios and priorities in renewable energy credits, market structures, power purchase agreements, smart grid, natural gas and other areas are beneficial to the State and region.

Objective:

Continue working with the ISO-NE, other New England states, the Northeast International Committee on Energy (NICE) and the New England Governors' Conference (NEGC) to determine an appropriate agreement on "socialized" and other collaborative means of funding transmission costs.

Implementation:

- ✓ Continue to represent Maine's interests in various ISO-NE and NEGC meetings and forums.
- ✓ Continue to pursue an open dialogue with the ISO-NE and NEGC key staff.

Status: On-going.

OEIS and the MPUC participate with and on the committees mentioned above to come to an agreement on transmission financing in the region. OEIS and the Governor's office also held several meetings in 2010 with senior staff at ISO-NE on the issue.

Objective:

Support and encourage Federal funding of an enhanced "smart grid" transmission system in Maine and New England.

Implementation:

- ✓ Work with the Maine Congressional delegation to obtain Federal funding for transmission projects in Maine.
- ✓ Work with various state-related organizations, the NICE Committee, the NEGC, the Eastern Canadian Provinces, DOE, U.S. EPA, the National Governors Association and the Obama Administration to obtain Federal funding for transmission projects in Maine.

Status: On-going.

ARRA funding has been made available, to both Central Maine Power and Bangor Hydro for the installation of smart meters.

Goal:

Support the development of electrical transmission projects in Maine to accommodate economically and environmentally sustainable renewable energy from Northern Maine and Canada.

Objective:

Continue working with the NEGC and Eastern Canadian Premiers on an agreement on the transmission of clean, renewable power from Canada into New England.

Implementation:

- ✓ Continue to lead Governor Baldacci's effort with the New England states to craft a proposed energy policy initiative to the Eastern Canadian Premiers on clean, renewable bilateral power transmission.
- ✓ Continue to work with the MPUC, the Maine Public Advocate and New Brunswick to develop an MOU on clean, renewable, bilateral power transmission.
- ✓ Continue to Chair the NEGC Power Planning Committee and co-chair the NICE to investigate, discuss and recommend potential strategies for clean, renewable, bilateral power transmission between New England and the Eastern Canadian Provinces.

Status: On-going.

Maine led the effort with the other New England states to develop a New England Governors' Renewable Energy Blueprint to guide the development of New England's renewable resources while working with the Eastern Canadian Provinces.

Efforts to develop an MOU with New Brunswick have terminated due to the potential MOU of Hydro Quebec to acquire New Brunswick Power's generation and transmission assets. This second MOU was never finalized.

OEIS continues to participate in the above mentioned regional and international energy-related committees on behalf of the Governor.

OEIS is working to oppose Federal Energy Regulatory Commission (FERC) and Congressional efforts to subsidize distant terrestrial wind resources to the detriment of Northeast, harm regional efforts to promote local renewable generation, require Northeast ratepayers to bear unfair economic burden, usurp states' authority on resource planning and transmission line certification and siting and hamper clean energy jobs in Maine.

OEIS is a point of contact with Hydro Quebec and other Eastern Canadian companies to explore acquiring capacity and energy to reduce electricity costs for Maine consumers and/or to obtain a beneficial hedge against price volatility, including by: (1) long-term contracts that provide capacity and energy at favorable prices; (2) contracts that provide a hedge against market costs and volatility and/or; (3) contracts that enable resources to offset transmission–related costs. Proposals that are most likely to reduce electricity rates, enhance grid reliability, provide tangible economic benefits to Maine businesses and residents, enhance the environment, provide long-term, sustainable and reliable electricity to Maine consumers will be evaluated very favorably. OEIS has been a strong proponent of regional collaboration and cooperation on energy, economic development and environmental issues.

Goal:

Promote natural gas as a "transitional fuel" by expanding the natural gas infrastructure to all sectors in Maine.

Objective:

Convene a year-long, natural gas "dialogue" with all major natural gas players in the state to define the critical challenges regarding the development of traditional natural gas and Liquefied Natural Gas (LNG) in Maine and to identify opportunities for the development of traditional natural gas and LNG projects where economically, socially and environmentally feasible.

Implementation:

- Establish a host committee of key natural gas industry leaders.
- Organize a "kick-off" reception for key natural gas industry, regulators and other stakeholders to be addressed by Governor.
- Conduct a series of 4-5 policy dialogue meetings over the next year to discuss important issues facing the natural gas industry, potential expansion and potential barriers and solutions.

- Continue to explore the feasibility of the development of a LNG facility in Maine.

Status: On-going.

OEIS has begun planning for the establishment of a natural gas "dialogue". Current plans are to hold a "kick-off" event in 2011.

Objective:

Facilitate opportunities for private industry and residential customers to connect with natural gas companies in Maine to explore potential natural gas expansion projects.

Implementation:

- ✓ Continue to facilitate relationships and work with natural gas utilities in Maine to develop specific expansion projects to all sectors.
- ✓ Recruit large potential customers to anchor gas network expansions.

Status: On-going.

OEIS continues to coordinate with private companies and Maine's natural gas providers to discuss the potential for expanding natural gas infrastructure in all sectors as well as recruiting large anchor customers for increasing the use of natural gas over other fossil fuels.

OEIS is working with companies to support the development of liquefied natural gas (LNG) projects in Maine, including appearing before the Board of Environmental Protection.

V. STATE OF MAINE LEADING BY EXAMPLE

Goal:

Continue "lead by example" initiatives in Maine by implementing progressive energy policies applicable to State, County and local governments.

Objective:

Continue the State's "Clean Government Initiative" and expand upon current energy-saving policies.

Implementation:

- ✓ Continue purchasing 100% of "green electricity" at State facilities.

✓Continue and increase the purchase of biofuels for heating at state facilities and expand to transportation fleet.

✓Continue to incorporate LEED standards for all new and renovated state buildings.

✓Continue to expand the hybrid car fleet from its current 90 hybrid cars.

✓Continue to require state-purchased vehicles to meet 30 miles per gallon fuel economy.

✓Continue to expand the purchase of environmentally friendly commodities and services.

✓Continue to expand the purchase of paper and paper products with 30% post-consumer content.

✓Pursue the purchase of "wholesale power" by all State facilities.

Status: On-going.

The above implementation measures have all continued. The Renewable Energy Credits purchased to cover the 100% "green electricity" is generated from Maine hydro facilities in Rumford and Auburn.

Goal:

Continue to plan for Maine's long term energy independence and security by using a 50-year planning horizon.

Objective:

Monitor progress of the Plan and quantify energy reductions, benefits, and expenditures.

Implementation:

✓Report annually to the Governor and the Utilities and Energy Committee on the progress of meeting the goals, objectives and implementation measures included in this Plan and revise as necessary.

Status: Completed.

OEIS has completed its second annual report on the progress achieved on the State Comprehensive Energy Plan. However, it does not include specific quantified energy reductions, benefits and expenditures.

OEIS participates in the State Heating Oil and Propane Program (SHOPP) to obtain and evaluate heating oil, kerosene and propane price information The data collected through SHOPP is used by the U.S. Energy Information Administration and States in responding to Congressional and consumer inquiries and as a valuable means of

communication between Federal and State governments and industry in the event of sudden market changes.

Objective:

Advocate for the goals included in this Plan at the State and Federal levels.

Implementation:

- Work with the Administration and the Utilities, Energy and Technology Committee to determine top priorities, implementation measures and how to achieve them.
- Work with the Maine Congressional delegation to establish a baseline knowledge of the state's energy goals and objectives and determine how best to enlist Federal support and funding.

Status: On-going.

OEIS has proposed the development of a Memorandum of Understanding (MOU) to create a Clean Energy and Efficiency Partnership between the DOE and the State of Maine. The MOU would strive to achieve all cost-effective energy efficiency in the State of Maine; provide resources to invest in renewable energy projects; support investment in improving transportation and fuel efficiencies; and make available the financial, regulatory and policy support to upgrade electricity and natural gas services, transmission systems and infrastructures.

OEIS is working with its New England and Canadian counterparts, including ISO New England, CONEG, NESCOE and others to support transmission policies that encourage coordination and collaboration in eastern interconnection and provide sufficient incentives for transmission infrastructure without federal integrated resource planning or transmission subsidization.

In 2010, OEIS was designated Maine's State Energy Office effective July 1, 2010. The DOE State Energy Program (SEP) provides financial and technical assistance to states through formula and competitive grants. States use their formula grants to develop state strategies and goals to address their energy priorities. The state energy offices in each state and territory are a vital resource for delivering energy benefits, addressing national energy goals, and coordinating energy-related emergency preparedness across the nation. State energy offices propagate the financial leverage of SEP funds by partnering with public, non-profit, private and other organizations to identify and pursue opportunities for energy technologies, programs and projects.

OEIS advocated for ratepayer relief of the cost burden of maintaining nuclear spent fuel sites that no longer generate electricity.

In 2010, OEIS was invited to become one of the state associate members of the* Alliance to Save Energy *a non-partisan group advocating energy efficiency policies.

Senator Collins is currently a vice chair of the Board of Directors. The OEIS sits on the Policy and Program Committee to steer federal policy.

OEIS Director is on the National Association of State Energy Officials Board of Directors. NASEO works to improve the effectiveness and quality of state energy programs and policies, provide policy input and analysis, share successes among the states, and to be a repository of information on issues of particular concern to the states and their citizens. The OEIS participates in various NASEO working groups, including its financing task force and works on an extremely wide range of energy programs and policies.

VI. EMERGENCY PREPAREDNESS AND RESPONSE

Goal:
Continue to plan for an Energy Emergency.

Objective:
Update the 2007 State of Maine Energy Emergency Management Plan.

Implementation:

- ❍ Clarify the process and procedures of the Pre-Emergency Energy Management Plan.
- ❍ Continue to collect critical information regarding the energy sources, sinks and transmission/transportation infrastructure.
- ✓ Identify additional energy hazards.
- ✓ Convene meetings with other state agencies, the Energy Resource Council, private sector stakeholders, the utilities to assist in identifying issues and areas of critical concern.
- ✓ Continue to coordinate the collection, analysis and dissemination of critical energy information to the Governor, the legislature, the cabinet and the public.
- ✓ Continue to work and communicate with all relevant international, federal, regional, state, county and local officials to maintain the effectiveness of the State's Energy Emergency Management Plan.
- ❍ Continue to work with ISO-New England, the natural gas pipelines, the natural gas producers and the natural gas electricity generators to clearly identify the OP-4 Emergency Procedures, especially in the areas of natural gas electricity generation.

Status: On-going.

OEIS received $20,000 from ARRA funds in cooperation with the MPUC as part of their Energy Assurance Planning grant to update and revise Maine's Energy

Emergency Plan. The Plan will provide the Governor, the Legislature, the Executive Departments, the energy industry and the general public with a clear, concise and comprehensive blueprint and strategy to address a potential or actual energy emergency caused by a supply disruption, a rapid and unsustainable increase in energy prices or other energy emergency situation. The Plan will be completed by March of 2011.